M/047/013

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May 30, 2000

CBNV-1 Amendment

MR. DOUGLAS M. KOZA
DEPUTY STATE DIRECTOR
P.O. BOX 45155
SALT LAKE CITY UTAH 84145-0155

RE: Revised Mining Plan on the Cowboy Gilsonite Vein lease U-0115850, Uintah County, Utah

Dear Mr. Koza:

Enclosed is the Revised Proposed Mining Plan on the Cowboy Gilsonite Mine. We have addressed all of the issues raised in the letter sent to us from the BLM dated March 2000. The original mine plan has changed, and the Revised Proposal addresses these changes.

We request your early consideration for approval. If you have questions or wish to discuss the matter do not hesitate to contact the undersigned or Stephanie McKeachnie, a legal assistant in our office, who is familiar with the matter.

Thank you for your time.

Very truly yours,

McKEACHNIE, ALLRED,
McCLELLAN & TROTTER, P.C.

Gayle McKeachnie

By: Gayle McKeachnie

Enclosures

GFM/sm

cc: Tony Gallegos, Division of Oil, Gas and Mining
Gordon Ziegler, President ZCMC
Stanley Wagner, Superintendent

M/047/013

REVISED
PROPOSED MINING PLAN
COWBOY GILSONITE MINE

CBNV-1
AMENDMENT

Prepared for

Ziegler Chemical & Mineral Corporation
Vernal, Utah

and

Bureau of Land Management
Vernal District Office
Vernal, Utah

by

McKeachnie, Allred, McClellan, & Trotter, P.C.
Attorneys at Law

May 2000

PROPOSAL TO MINE

Ziegler Chemical & Mineral Corp. proposes to exercise its leaseholder's rights to mine Gilsonite reserves from Lease No. U-0115850. This lease is located in Section 3, T9S, R24E in Uintah County, Utah, and had previously been mined from four shafts (C-1, C-2, C-3, and C-4). In order to supply the appropriate quality and quantity of Gilsonite requested by our customers, ZCMC will commence mining operations immediately upon approval of this mine plan.

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LIST OF FIGURES

LIST OF EXHIBITS

1.0 PERSONS RESPONSIBLE FOR OPERATIONS

Gordon Ziegler, President
Ziegler Mineral and Chemical Corp.
100 Jericho Quadrangle, Suite 140
Jericho, New York 11753
(516)681-9600

2.0 GENERAL DESCRIPTION OF GEOLOGIC CONDITIONS AND MINERAL RESOURCES

The Cowboy gilsonite vein is located in the northeastern part of the Uinta Basin about 40 miles southeast of Vernal, Utah, and is the largest known gilsonite vein in the world (Figure 2.1). The Cowboy mine would be located within the Book Cliffs Resource Area of the Vernal District of the Bureau of Land Management (BLM)on the Cowboy vein. It is one of the many veins that occur in this portion of the Uinta Basin (Figure 2.2). Gilsonite, a solid, brittle hydrocarbon, was formed when liquid hydrocarbons from the kerogen-rich beds of the upper part of the Green River Formation flowed into near vertical fractures in the Uinta Formation and subsequently solidified to form veins (Verbeek and Grout 1992; Monson and Parneli 1992). Gilsonite has been mined extensively in the Bonanza area since the latter part of the 19th century. It is shipped worldwide and is used in, among other things, the production of inks, sealing mastics, road paving, paints and varnishes.

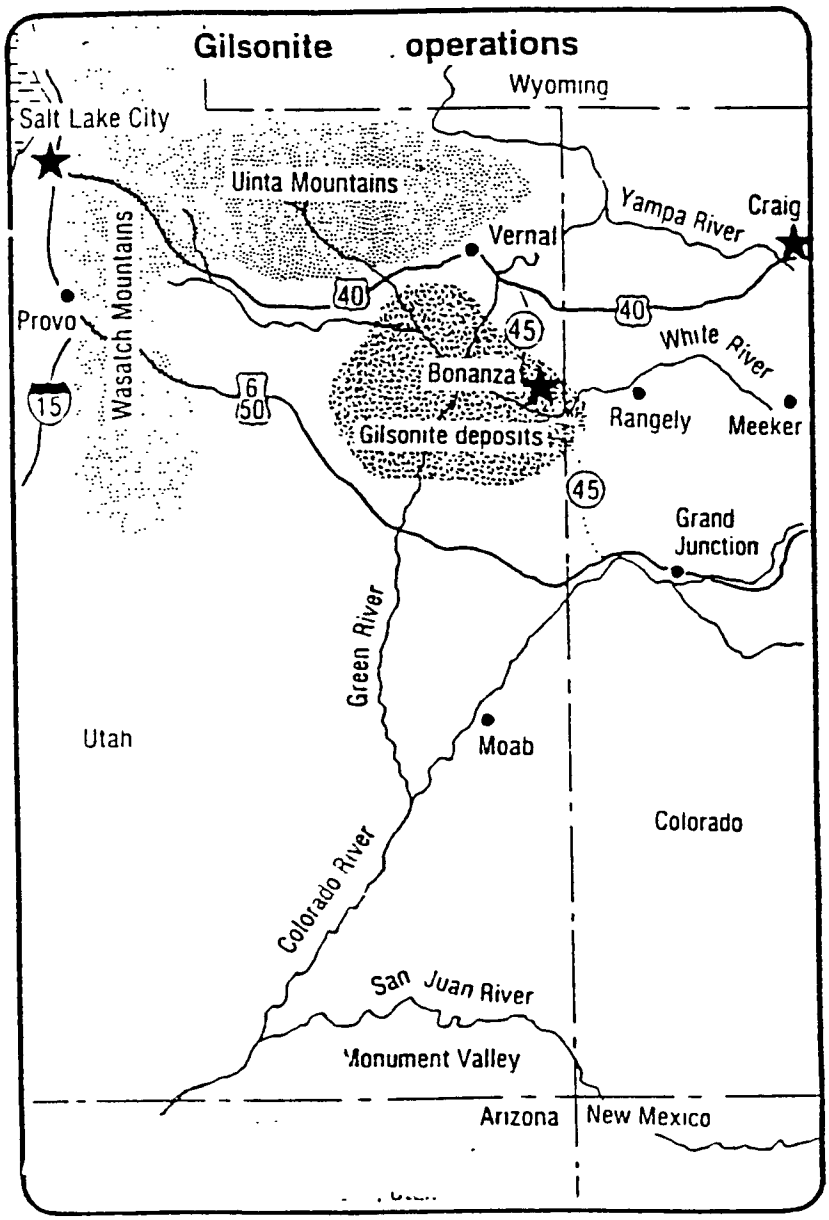


Figure 2.1 General Location Map

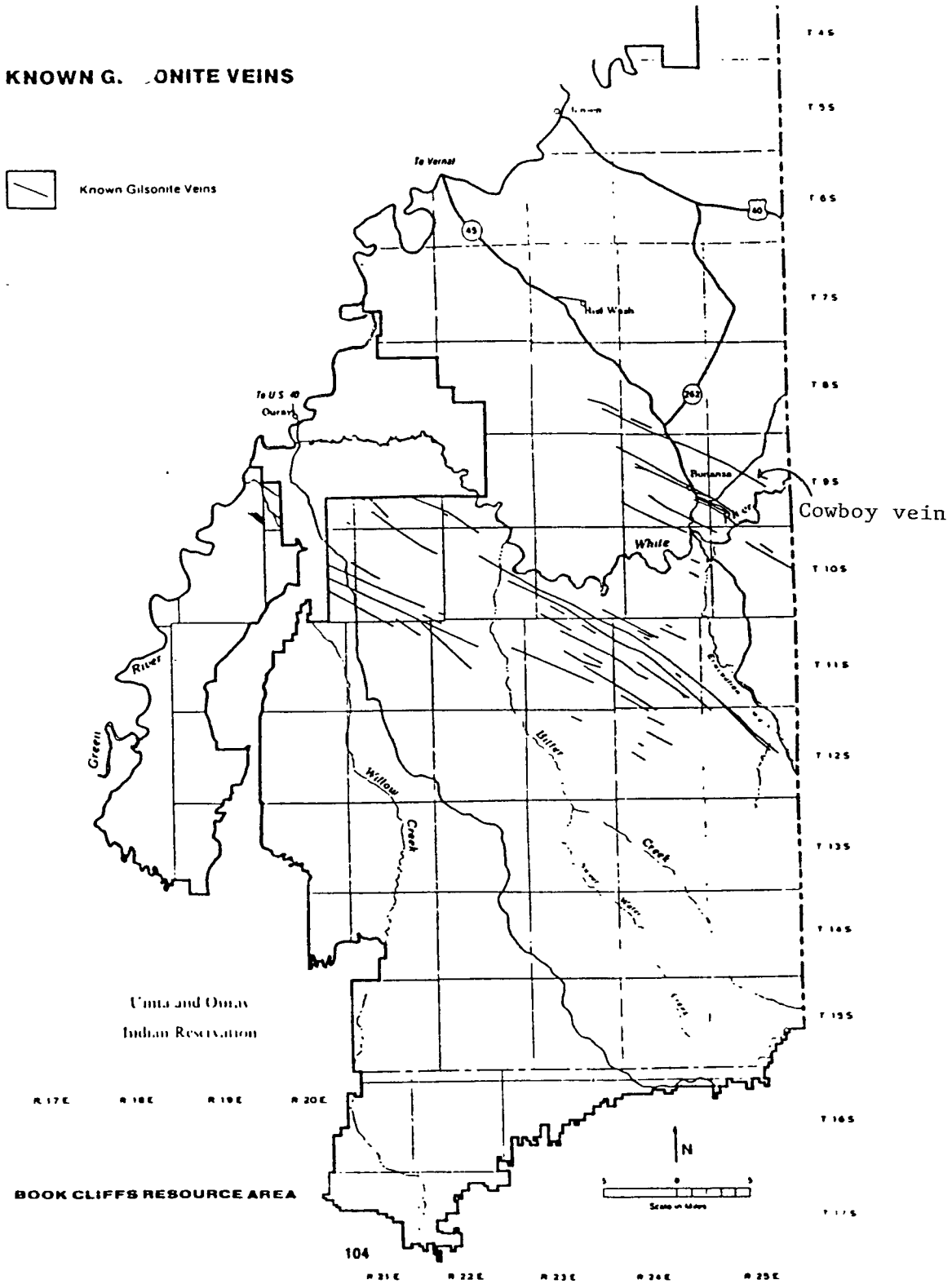
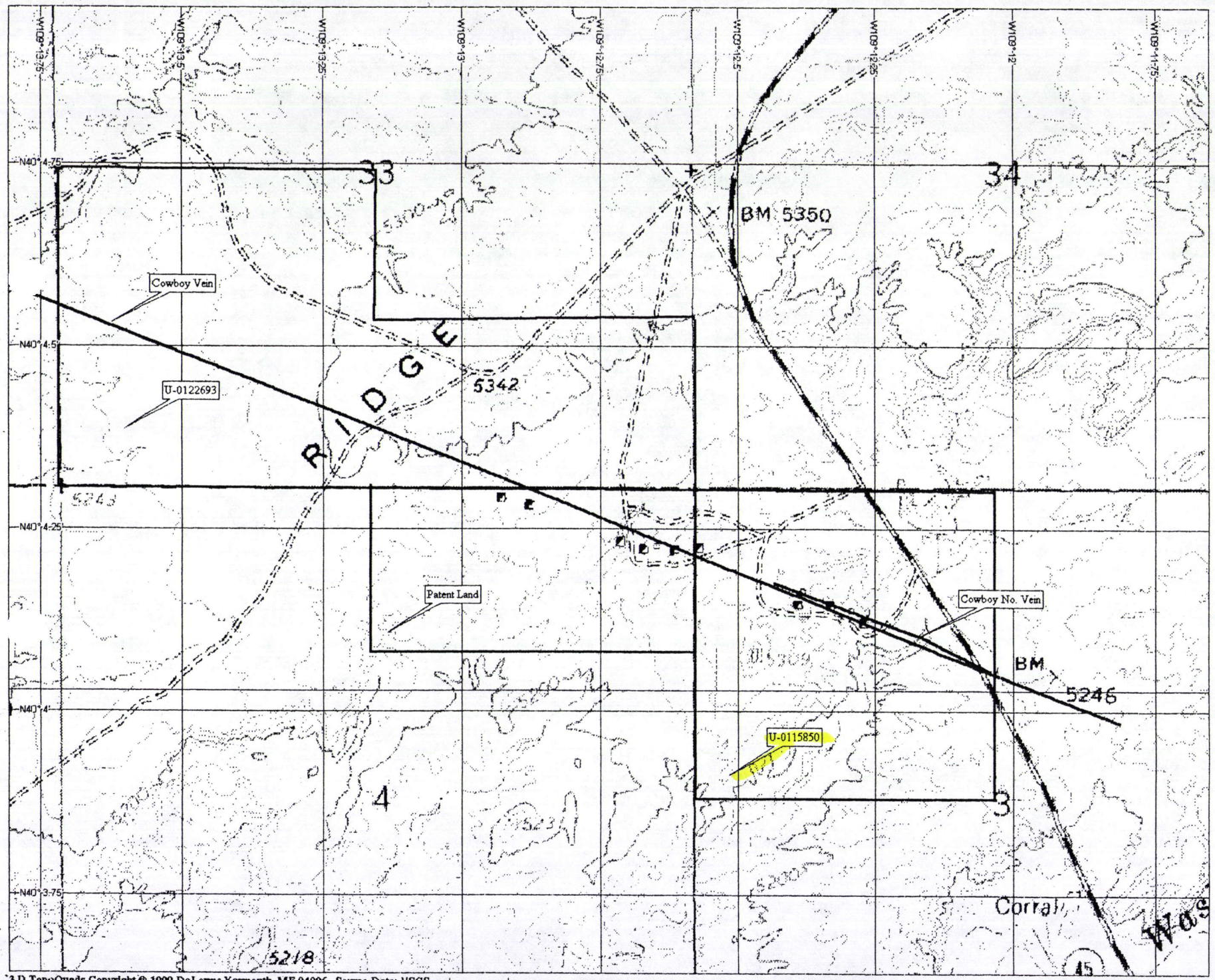


Figure 2.2 Location of Gilsonite Veins in Uinta Basin

3.0 TOPOGRAPHIC MAP

An aerial photograph showing the topographic area covered by U-0115850 is on the following page labeled as Figure 3.1.

Figure 3.1 Topographic Map showing location of Lease U-0115850.



4.0 PROPOSED METHODS OF OPERATING

4.1 MINING METHOD

Ziegler Chemical and Mineral Corporation (ZCMC) proposes to initially sink a shaft at the C-1 location of the north vein. All of the surface facilities (hoist house, air lift, bins, etc.) will be placed around this shaft location. Refer to the Property Survey map labeled Exhibit 1. ZCMC proposes to lay approximately 100 feet of 12 inch airlift pipe and an equal amount of 2 inch compressed air line on the surface from the CNV-1 (north vein) shaft to the eastern most escapeway of the old C-1 (south vein) mine. Refer to the Cowboy South Vein Gilsonite Mines map labeled Exhibit 2. ZCMC will enter this escapeway and commence mining to the east along the length of the south vein. The mining will progress at a 45° angle as shown on Exhibit 2 as diagonal lines. Similar mining sequencing will be used on both the South and North vein. A pillar will be left from the surface to a depth of 35 feet to prevent surface subsidence, as well as for safety reasons. This mining will continue until ZCMC rocks out or comes to the property line allowing for a 50 foot pillar on the west side of the east boundary line. This pillar will satisfy the U.S. Bureau of Mines regulation (43 CFR) requiring a 50 foot pillar of ore between lease boundaries. The old C-4 mine shaft on the south vein will be used as an escapeway.

After this phase has been completed, ZCMC will remove the air lift and compressed air lines from the surface and reclaim the areas around the C-1 (south vein) mine escapeway and the C-4 (south vein) escapeway. This reclamation will include the removal of all man-made structures to a level two feet below the surface. We will then scarify the area and re-seed with native plants as

recommended by the Bureau of Land Management. Mining activity on the south vein should be completed within 5 years.

Mining on the north vein will proceed to the southeast and to the northwest from the mining shaft along the line of the vein. An escapeway will be located approximately 600 feet southeast of the north vein shaft. Another escapeway placed 500 feet to the northwest of the shaft. A pillar will be left from the surface to a depth of 35 feet to prevent surface subsidence, as well as for safety reasons. This mining will continue until ZCMC rocks out or comes to the property line allowing for a 50 foot pillar on the west side of the east boundary line. This pillar will satisfy U.S. Bureau of Mines regulation (43 CFR) requiring a 50 foot pillar of ore between lease boundaries.

The Gilsonite would be mined by a stoping process. Stoping involves sinking a shaft and then removing the mineral by excavating along the vein in both directions at a 45 degree angle to the shaft. The bottom 20 feet of the shaft would be the "sump", where Gilsonite removed from the 45 degree angle slopes would fall and be airlifted to the surface through the 12 inch diameter vacuum pipe located in the utility shaft. The Gilsonite will be removed in 100 foot deep blocks. A 10 foot thick pillar will be left unmined between each 100 foot block of Gilsonite to lend support to the mine. This process will be repeated until the bottom of the workable ore would be reached.

Wooden stulls (timbers) would be placed wherever necessary to brace the walls of the mine, but generally in a 5 x 5 foot horizontal pattern. The timbers will control loose rock areas and will be 4 ½" to 8" in diameter. They will be placed by chipping notches in the wall and by using wooden wedges to tighten them.

During mining, floors would be constructed of chain link fence supported by wooden timbers chipped into the rock walls.

If rock conditions are found in the vein which prohibits mining, then it is possible that Ziegler will move to the next shaft and proceed to mine back toward the initial shaft. This will be done to get under the rock and back into recoverable ore. In the event that this is necessary, vacuum and compressor air lines will be on the surface to provide the needed facilities to mine under the rock through the other shaft. Once through the rock, mining will be moved back to the initial shaft and continue until all the recoverable ore is mined.

4.2 MINING PRODUCTION AND RECOVERY

There is no cutoff grade for Gilsonite. Minimum width of vein is determining factor. Vein width for efficient mining would be at least the width of a man's shoulder so the miner can turn sideways in the mine to enable use of a chipping hammer.

On the south vein the anticipated depth of the workable ore is approximately 300 feet, assuming the vein maintains sufficient width. The ore depth of the north vein is unknown. At times mining activity may occur simultaneously in both mines. Each mine is estimated to produce 30-50 tons of Gilsonite a day.

The ore would reach the surface in an ore bin, from which it would be loaded into covered trucks and transported to ZCMC facilities at Little Bonanza. A partition will be constructed around the bottom of the ore bin to prevent wind from blowing Gilsonite dust while being loaded into the trucks.

The normal workforce would include two underground miners: one hoistman at the surface, and on occasion, one timberman.

Ziegler would prepare and maintain records and maps showing mineral production from the leased lands and submit them to the Authorized Officer at the end of each royalty reporting period. The records and maps would include disclosure of any problems encountered in the mining, including such things as subsidence. Ziegler estimates that mining will be undertaken for the next 10 to 12 years.

4.3 PROPOSED ROADS

A previously existing road would be used for access from State Highway 45 to the mine site. This road will be approximately 525 feet long by 25 feet wide, and currently disturbs about 13,125 square feet. The entire length will need to be re-graded and about 200 feet of the road will need to be bermed to satisfy the Mine Safety and Health Administration standards. This berm will need to be 18 inches high. Refer to Exhibit 1.

4.4 STRUCTURES AND FACILITIES TO BE BUILT

4.4.1 Shafts

The surface areas for the shaft located on the north vein as well as the two escapeways for the north vein and the entryway into the south vein would be cleared with a backhoe. A rebar reinforced concrete collar approximately 18 x 5.5 feet would be installed at the surface to stabilize the shaft opening. The shaft would be divided into three compartments supported by timbers. One compartment, the shaft, would be about 7.0 x minimum of 2.5 feet. There is a compartment on each side of the shaft which measures

approximately 4.0 x minimum of 2.5 feet. One of the compartments would contain a ladderway. The other would contain a 2 inch diameter pipe for compressed air to power the pneumatic chipping hammers, and a 12 inch diameter pipe to extract the mined ore from the bottom of the shaft using vacuum.

The primary shaft on the north vein will contain a hoist system for the workers and their equipment. The shaft entering the old C-1 (south vein) escapeway will have a small ten foot high derrick above it to facilitate the lowering of materials into the mine. Personnel will enter by using the ladderway.

4.4.2 Escapeways

Escapeways for the north vein mining will be located on each side of the shaft. The escapeway to the southeast will be approximately 600 feet from the shaft. The escapeway to the northwest of the shaft will be approximately 500 feet away.

ZCMC will utilize the old C-4 mine as the escapeway for the south vein mining activities. The C-4 mine is located approximately 500 feet southeast of the proposed re-entry site into the escapeway of the old C-1 (south vein) mine.

The roof of these escapeways would be located 35 feet below the surface and each would connect to the surface via a vertical hole containing a ladderway. The escapeways and the hoist shaft will also be used for ventilation and operation.

4.4.3 Surface Facilities

A number of facilities other that the openings for the mine shaft and escapeways would be located on the surface(Refer to Exhibit 1), including:

A. A hoist house and headframe to raise and lower the conveyance in the manway portion of the shaft by means of an electric powered hoist. The hoist is a 75 horse power electric Louis Allis single drum hoist. The conveyance will be 25" deep, have a 6.5' width and 10' depth.

B. A 25 ton ore bin for the storage and loading of Gilsonite will be located next to the shaft.

C. A 100 bag Micropul dust collector will be placed on the top of the storage bin to remove dust from the airlift system.

D. Two, electric powered Wheeler and Reeder airlift fans (one 75 hp, one 50 hp) will be installed on a pad next to he headframe. These fans are designed to lift ore to the surface through a 12-inch pipe in the utility shaft.

E. A compressor house for the electric powered 150 horsepower compressor to supply air to equipment in the mine through a 2-inch pipe in the utility shaft.

F. Topsoil from disturbed areas would be stored in piles in the immediate vicinity of the area from which they were removed. The topsoil pile will be seeded to stabilize it for future reclamation use.

G. A small waste rock pile. It is anticipated that very little waste rock would be produced. Only the Gilsonite would be extracted from the vein.

H. There will be no drain fields, explosive storage, or washing facilities, on-site.

I. Electricity to supply power to the hoists, compressor, and fans would be provided by an existing power line that served the old C-1, C-2, and C-3 mines. No more that two poles would be required at the new mine site. The poles would be designed to protect raptors from electrocution.

Where surface disturbance would be necessary, sagebrush and other vegetation would be removed with a road grader. A small area may need to be leveled by cut and fill at the location of the hoist house and compressor shed.

The estimated area of disturbance at the north vein mine location is 225 feet by 80 feet (18,000 sq. ft.). The present road leading to the north vein mine site is 525 feet long by 25 feet wide (13,125 sq. ft). The two escapeways for the north vein, and the entry and escapeway for the south vein will take up an area of 20 feet by 20 feet square (400 sq. ft.) for a total of 1600 sq. ft. of displacement. The proposed berm to collect run-off will be approximately 50 feet long, and will cut an area 20 feet wide (1000 sq. ft.).

Total estimate of displacement is 33,725 sq. ft. or about 0.77 acres.

5.0 ENVIRONMENTAL ASPECTS

5.1 WATER

No water would be used in the mining operation. Any underground water encountered will be handled in accordance with state and federal water regulations and requirements. A berm would be constructed on the low side of the shaft and ore bin area. It will be 2 feet high and about 50 feet in length to contain any runoff waters from rain or melting snow. Refer to Exhibit 1.

5.2 AIR QUALITY

Ziegler would install Micropul dust collectors on the top of the ore storage bin to collect dust raised by the airlift system that brings ore up through the utility mine shaft and into the ore bin on the tipple. With the use of the Micropul filtering system, both Gilsonite dust and ore will be contained in the ore bin to prevent the loss of Gilsonite dust into the atmosphere.

5.3 FIRE PROTECTION

Three Ansul 20-pound dry chemical nitrogen-charged fire extinguishers would be on hand: two in the hoist house, and one by the compressor. All rules and regulations regarding fire prevention would be strictly adhered to. If a fire grows so large that it cannot be controlled with fire extinguishers, Deseret Generation and Transmissions fire crew will be called to assist in fighting the fire. Uintah County/Vernal City will also be called as back up. If an under ground fire occurs, the mine would be sealed. In order to prevent an underground fire, the following precautions will be taken:

- All combustible materials including vegetation will be kept away from mine openings;

- Fire retardant paint will be put on all timber used in mine openings;

- No electrical equipment will be used underground; and

- Smoking and smoking materials will be prohibited underground.

5.4 SAFETY PRECAUTIONS

All openings in the ground (shafts and escapeways) would be fenced with chain link fencing. All enclosures would have gates with locks to provide a first line of security. Sufficient area inside the fenced area would be maintained for ingress and egress. The gates would be locked when the mine is not in operation. Signs will be placed in order to warn the public of mining operations.

5.5 MISCELLANEOUS RULES AND REGULATIONS

In order to minimize the impacts to the environment from personnel involved in mining activities, employees would be subject to the following regulations:

- No open fires of any kind except in approved buildings in approved stoves or furnaces.

- No illegal harassing or shooting of wildlife.

- No trash left in any unauthorized place.

- No unnecessary off-road driving.

- No collecting of plants.

Miners would be instructed to maintain a clean camp and to report any unusual activity that could be detrimental and/or unlawful.

5.6 COMMUNICATIONS

For safety and mine efficiency, radio communications would be maintained between the mine and the Ziegler office in Little Bonanza.

5.7 SOLID WASTE DISPOSAL

All garbage and solid wastes (other than waste rock) would be placed in covered 55 gallon cans then taken to a dumpster, located on ZCMC property. A commercial operator will then haul the dumpster to the county land fill. A toilet will be located at the mine site for use by ZCMC personnel. A 10 foot deep pit will be dug underneath the toilet facility to accommodate sewage, which will be allow to decompose in-situ.

6.0 SURFACE RECLAMATION

6.1 ABANDONMENT AND RECLAMATION

Upon completion of mine operations, all machinery, equipment, and debris would be removed from the site. The site, including access roads, would be graded to conform as closely as possible to premining conditions, scarified, and seeded with a mixture approved by the Authorized Officer. This reclamation process is to include the existing access road that was used during the mining of the old C-1, C-2, and C-3 mines. Reclamation within the fenced area of the old workings, and the old access road serving the old mined out area will begin upon approval by the Authorized Officer. For the safety of the men working in the mines any blasting that is necessary for the closure of any open veins will be done after all mining activity on this lease has ceased.

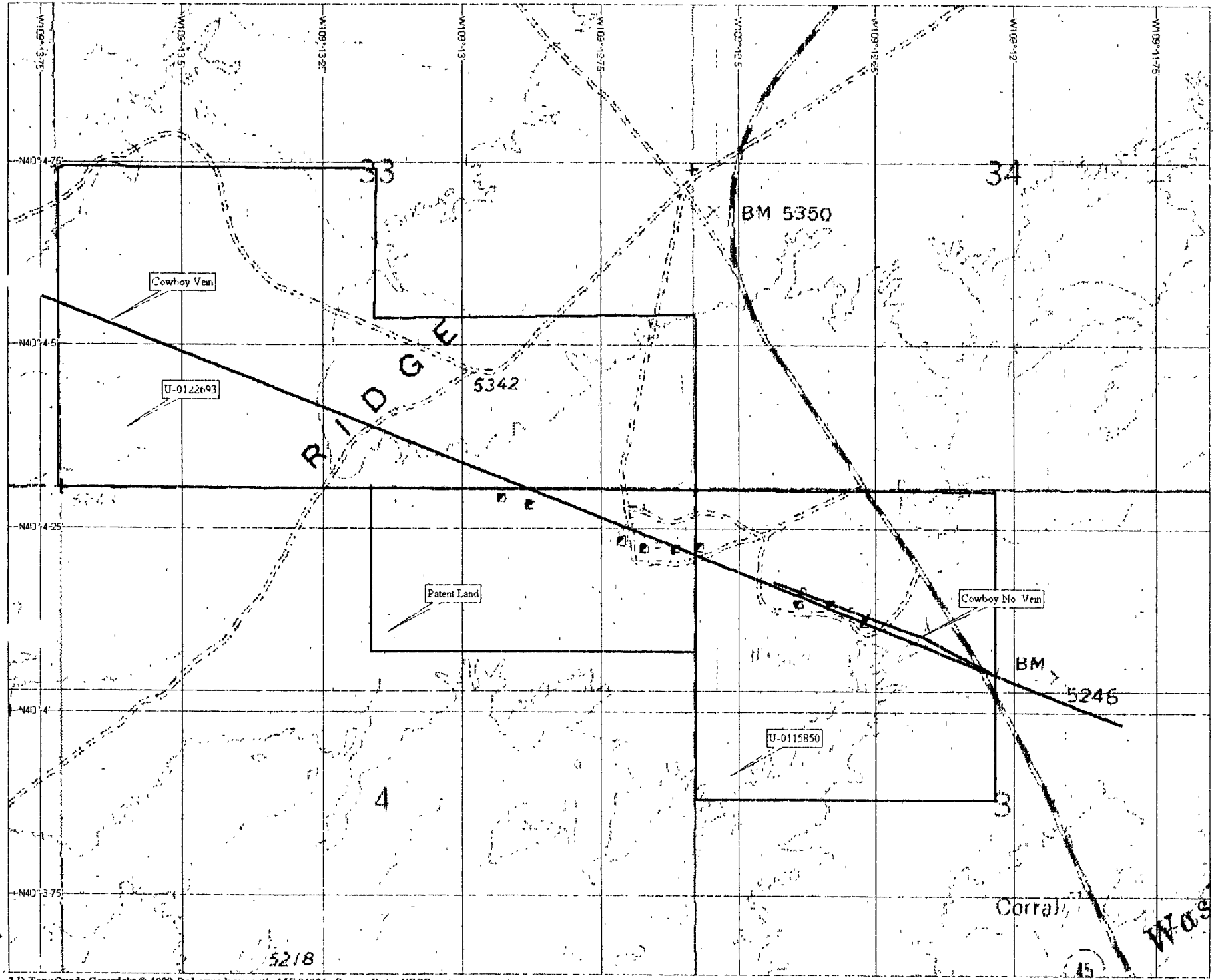
When the mine shafts and escapeways would be ready for closure, final designs would be submitted to the Authorized Officer prior to seal construction. The collar and other structures would be removed. If the seal is to be in and exposed rock outcrop, the top of the seal would be constructed to conform with the contour of the outcrop and would be no higher than the adjacent rock. The bottom of the seal would be placed on bedrock. If the seal is to be in a location where soil would cover the seal, the top of the seal would be placed on bedrock and covered with a minimum of 2 feet of topsoil. Where the surface pillar covering the vein has been removed (old south vein mines) the void left from mining would be blasted shut. Blast holes are anticipated to be in a 20 x 20 ft pattern. A blasting plan would be submitted to the Authorized Officer at least 120 days prior to any blasting. After blasting, the area would be contoured and seeded with a mixture approved by the Authorized Officer. The estimated disturbance area due to blasting would be 50 feet wide and 150 feet long, or 0.17 acres.

7.0 PROPERTY INFORMATION

This mine plan involves the property within the lease dated the 1st day of September, 1963 between the United States of America, through the Bureau of Land Management, and Ziegler Chemical & Mineral Corp. The serial number is U-0115850 gilsonite (Figure 7.1). The lease includes the following described lands:

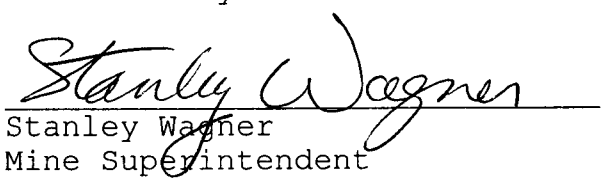
Township 9 South, Range 24 East, SL Meridian, Utah
Section 3, Lots 3, 4, 5, SW1/4NW1/4. Containing 152.25 acres.

Figure 7.1 Property Information



8.0 SIGNATURE PAGE

Submitted By:



Stanley Wagner
Mine Superintendent

PHOTOCOPY OF MAP PORTION
FOR I-2 AMENDMENT
ZIEGLER M/047/013
RECEIVED 3/18/00

- OVERSIZE MAP FILED SEPARATELY -

DANT # 5
Acres

INDEPENDANT # 4
1.4 Acres

INDEPENDANT # 3
1.38 Acres

1 Inactive 1977

7.59 Acres

LITTLE BONANZA

County Road

3.47 Acres
GRINDER

Storage Bld.
Solar Cell

GRINDERS
3.28 Acres

TO MOUNTAIN FUEL BRIDGE

1 Inactive 1977
ore bin
2 Independant
shaft
hoist house
Water Tank
compressor shed

COUNTY ROAD TO VERNAL

ZIEGLER PATENT LAND

Independent #2

Little Bonanza

Bonanza (BM 5456)

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1965. Field checked 1968

SCALE 1:24 000

1 MILE

7000 FEET

1 KILOMETER

Secondary highway, a hard surface

BONANZA QUAD MAP
FOR I-2 AMENDMENT
ZIEGLER M/047/013

- RECEIVED 3/18/00
- OVERSIZE MAP FILED SEPARATELY -

PHOTOCOPY OF MAP PORTION
FOR I-2 AMENDMENT
ZIEGLER M/047/013
RECEIVED 3/18/00

— OVERSIZE MAP FILED SEPARATELY —

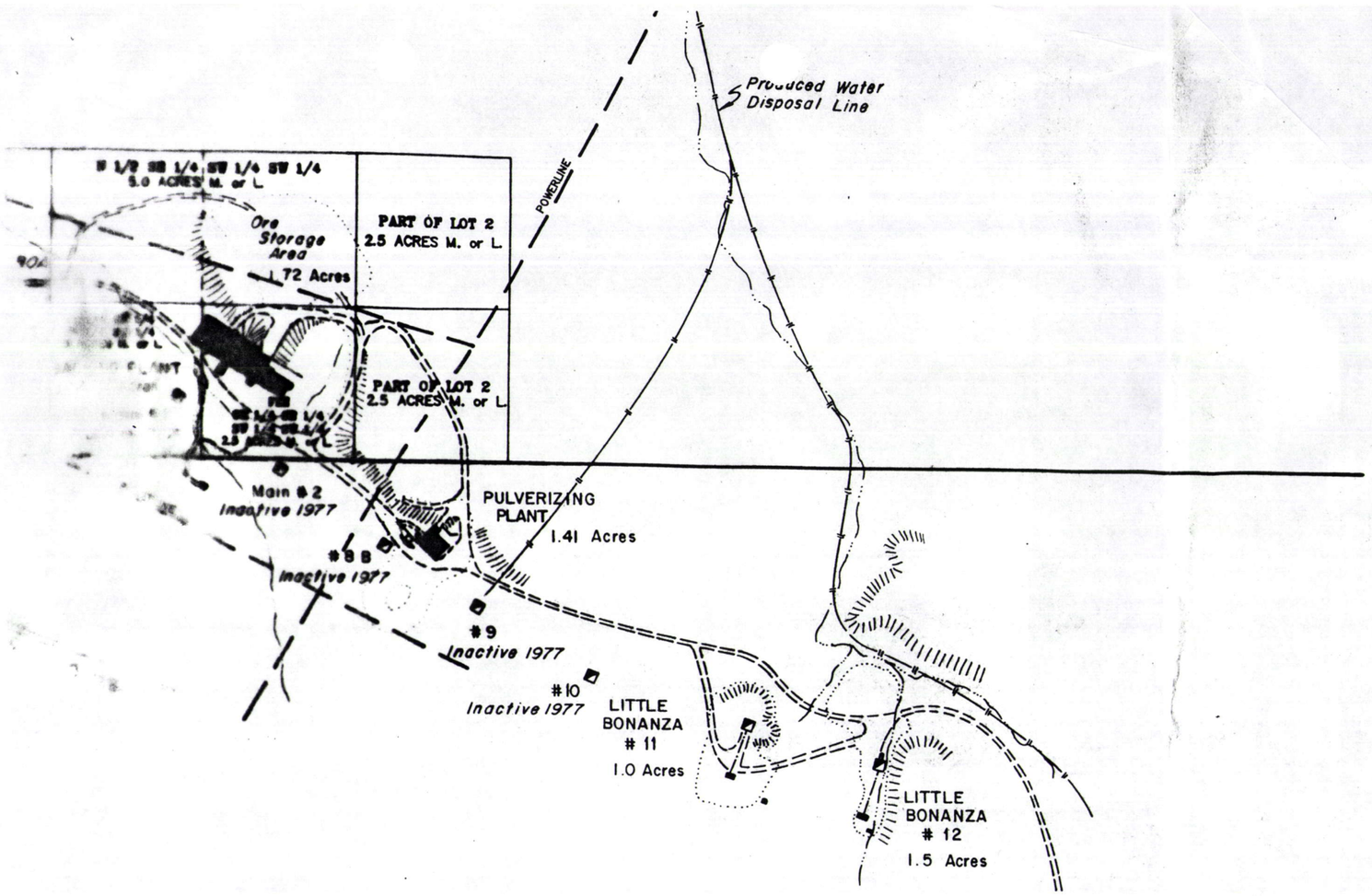


EXHIBIT A 1

REVISIONS
Oct. 14,87
1-25-95 D.J.S.
9-18-96 D.R.B.
04-06-00 DRB

ZIEGLER CHEMICAL & MINERAL CORP.
LITTLE BONANZA GILSONITE MINES
LAYOUT PLAT
LOCATED IN
SECTIONS 15, 16 & 22, T9S, R 24E, S.L.B.&M.
UINTAH COUNTY, UT.

Uintah Engin...
DR...
85 SOUTH ...

SCALE 1" = 300'
DATE 1/28/87